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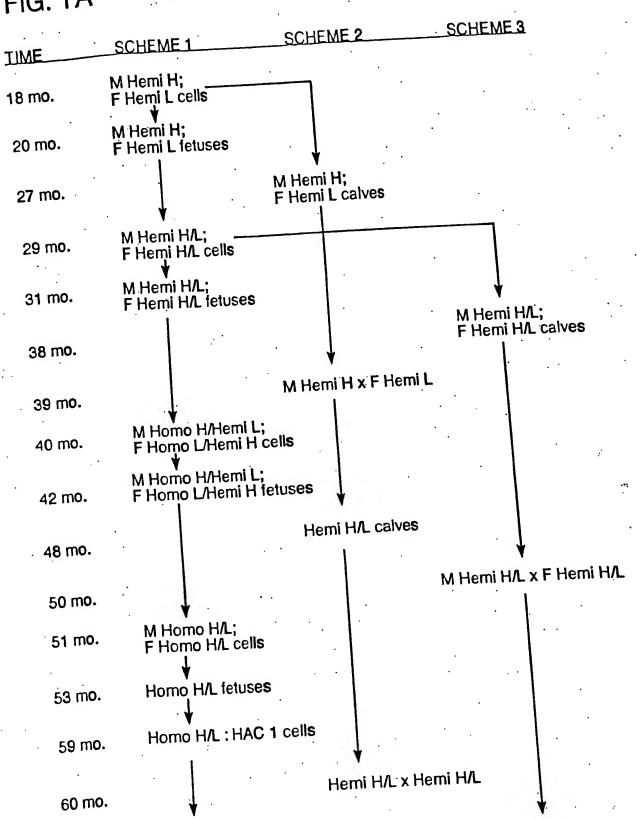
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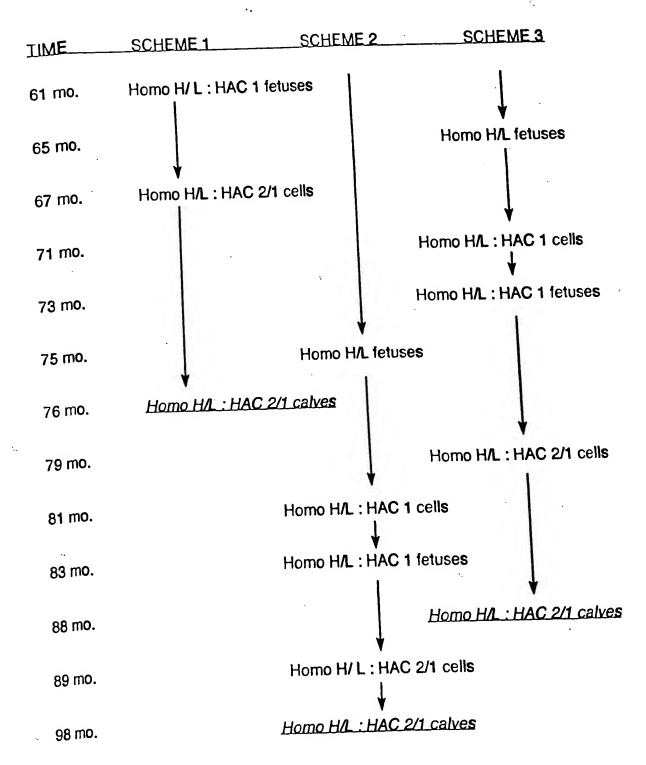
## FIG. 1A



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## FIG. 1A (CONT.)

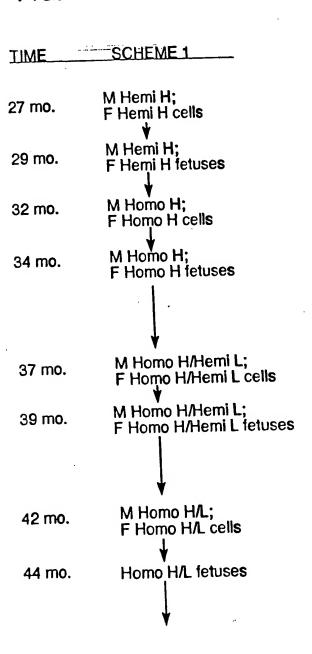


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#### FIG. 1B



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## FIG. 1B (CONT.)

IIME SCHEME 1

47 mo. Homo H/L: Δ or ΔΔΗΑC cells

49 mo. Homo H/L: Δ or ΔΔΗΑC fetus

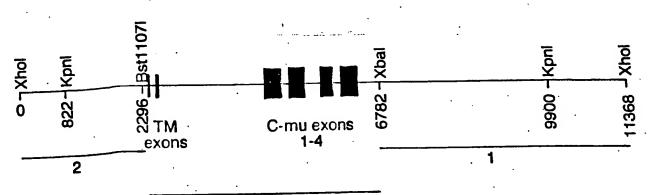
58 mo. Homo H/L; Δ or ΔΔΗΑC calf

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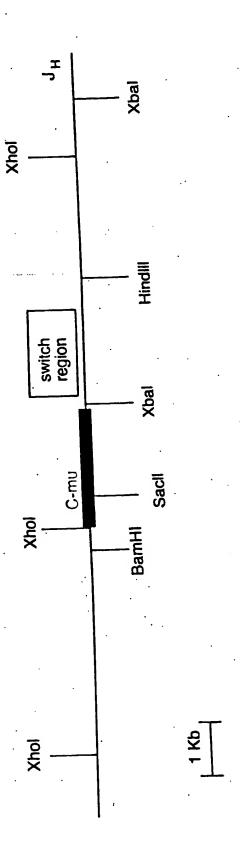
FIG. 2A



region replaced with neomycin resistance marker

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FIG. 3A

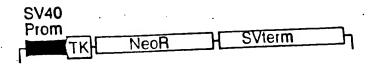
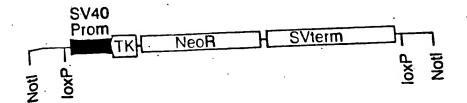
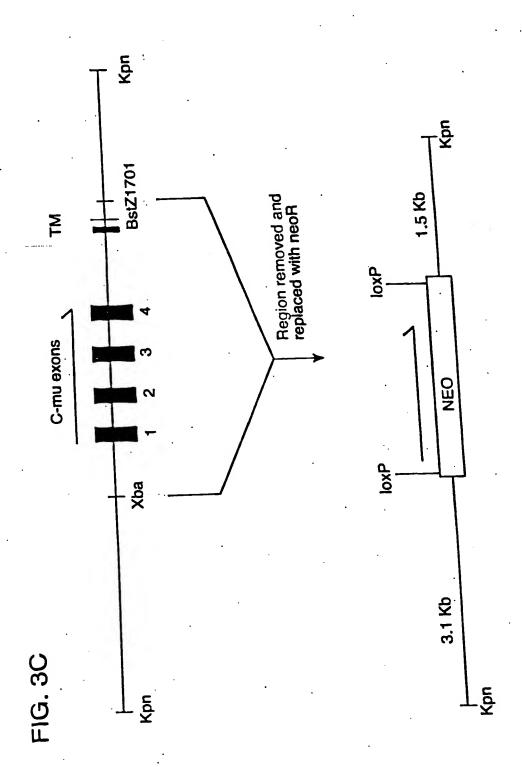


FIG. 3B



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FIG. 3D

BEtaccessas Bcegeccies acattete caginates and control of the contr SEQ ID NO:47 cagctacgattg1gagcacgctcacagtgcacacggcatg1gcacggtctcagcttaaccaccttgaaggagtaactcattaaag aggetetgaatgaaatacetteeaacaggtgetgagaacegecaggageagggaacggacteecegtggagececagaagg agccagccctgatgatacctcggccctgggccctcctcacgctgggagagagccagctcctgttgttcatgcctggcctgtggtt aggcaccctgcctgccgtggagcccctcacccaacgttcccccgcctgatgggttgggccgcaaaggacaccgtttaaccaga actgccttccaggagcctactgctgggaggcggccttctctgggaccaggtccactccactcccttggatagtcactgtcaggcc cctggtggcccacaagaggcgtcctgggaagcccagtctccttccagccctgaaattgcctccctggagagccagatcac ccicaccagciccicccagggiciccictcccatcccaccgccacctaccaggggigccgicacagctaa cctgacctccctgggttcgagcgtgccgcccctgtcggcccccacctggacccccgcagcctatctctgagggctaatgc ccetgleccetgeccegetgecagetgeccetetttecaggeetttecteegtgectetecagtectgeacetecetgeagettea cctgagacticctticaccctccaggcaccgtcttctggcctgcaggtgaggtctcgcgctccctcagggcacgatgtggctgca cacacceggccctcctcccgagtccctcctgcacacaccacgcgcacccgaggttgacaagccctgccgtggttgggattcc aggccacctigggaaaccagtccigggaictgcaactcggccatgitccigcatctggaccagccccaagacaccaccccggc elgececacigecolegeagagacacatgiccetticccalcagcaatgggitcagcactaggatatgcagcacacaggag igiggctiggggtaaaaaaccticacgaggaagcggtticacaaaataaagta

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#### FIG. 3E

SEQ ID NO: 48

tctagacccaccagcctcagttgaggttaaatggacccaaagcatctcaacaatttgcccaagtcaagccagctcaatgggttcc ctici gticaccca gici cagcccaccai ggiaaccca gcatacccc ggiaagccca gciagccca gccca gcca gccca ctcagctcagttcagcccagttcaatccagatcagcccaatccaggccagctcatcgagctcagctcagctcagctcaaccctctc agcccagctcacctgctcagccaagctaagcccagttcagcccagctcagcttaacccagctcacccactctgcccagctcagc ccagecci geteaacteageccageacageccaacti ggeteageteagettageccagettageccagettacceactec gee cagcicaaaca gcccaggicagcccaaccta gcicagticagcccagcicagcccagcicagcccagcicagcccagcicacccactc  $\mathbf{n}$ աստասան արարան արար gcccagcccagctgagcccagctcaactcagcctaacccagctcagcccagcttaacccagctcagcccagcccagcccagcccagct ccaectcacctectgtaggtggcctgaaccecegaacacaeacatgaaagcccaegtggttctgacgaeaaagggtcaeatccte ggagcccgctcgccccttcccctggtgcctgacacctccatcccgacaccaggcccagctggcccttctcccagctgtcagtc accactaccctccactctgggtgaaaagcttgttggagactttagcttccctagagcatctcacaggctgagacacacttgccacc ctcagagagaggccctgtctctgctgagcaggcaggcgctgcttctctgggagaggagagcctgggcacacgtccctgggtcct ggcctcctgggcacgtgccatgggcctgagatcccgccccgagtctaaaagagtcctggtgactaactgctcttggcaaatgt ccicattaaaaaccacaggaaatgcatcttatctgaacctgctcccaattctgtctttatcacaaagttctgctgagaaagaggatac tctctagcacagagaccatctgaaccccaaagctgcattgaacacctaagtgtggacgcaggaagtggtccctgtgggtgtgaa gcacccggcatcgcaggcagtaggtaaagacagattccctttcaagtagaaacaaaacaactcatacaaacatccctgggc agtgagtctggctgcaccggctcctggtccctggcatgtcccctgggctctctgacctgggcggattcctccgaatccttcgctg tgttaactcgtgacctgcctactggcctgggggcagaggccagggcccacacgtccccaggtgtgggcagtcccaggagaccc cccagccttggcgagcctggggactcagagcagagactgtccctccagacggtcccaggccccgctgactgccgcccacc gggcatcctctcaatccccagctagtagtgtagcagagtaactcacgacgaatgcccccgtttcacccaagtctgtcctgagat gggtacc

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4.4 Kb	1	PURE	4.6 Kb	*****
Xho	Xho		a aman di e ere	Xba
A NotT			. ^ M1uI	

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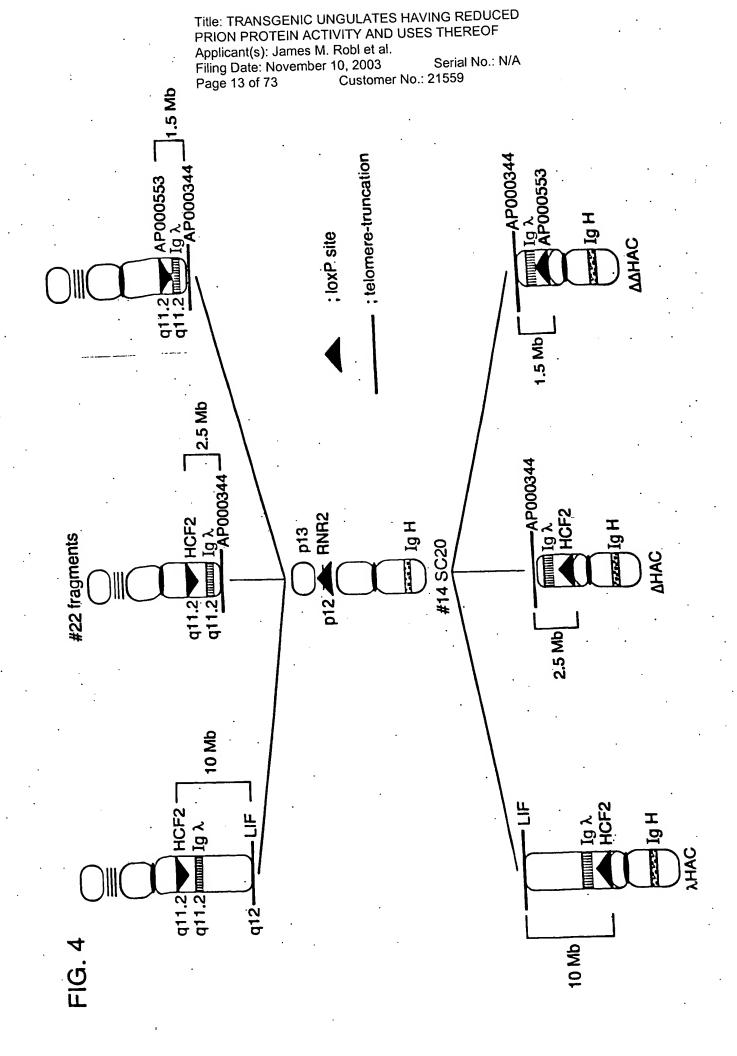
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### FIG. 3G

#### SEQ ID NO: 60

1 atgagatice etgeteaget eetggggete eteetgetet gggteeeagg 51 accaging gaigniging igaccagae iccecicice eigicialea 101 tecetggaga gaeggtetee ateteetgea agtetactea gagtetgaaa 151 tatagigatg gaaaaaccta mgtactgg cticaacata aaccaggcca 201 atcaccacag cumgatet atgetgme cageegnae actggggiee 251 cagacaggii caciggcagi gggicagaaa cagaiiicac acitacgaic 301 aacagigige aggeigagga igniggagie tanacigie neaaacaae 351 atatgiccca aatactitcg gccaaggaac caaggtagag atcaaaaggt 401 cigatgeiga gecateegie nectettea aaccateiga igageageig 451 aagaccggaa cigicicigi cgigigctig gigaatgati ictaccccaa 501 agatatcaat gicaagtgga aagtggatgg ggttactcag agcagcagca 551 аспесавав садписаса дассаддаса дезадавава сассасадс 601 ctcagcagca tcctgacact gcccagctca gagtaccaaa gccatgacgc 651 ctatacgigi gaggicagec acaagageet gactaceaec etegicaaga 701. gencagiaa gaacgagigi tag



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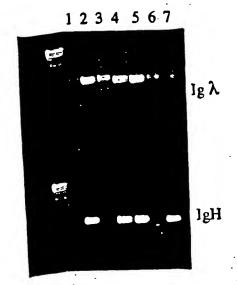
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## FIG.5



- 1. Bovine genomic DNA (negative
- 2. Fetus 5968 genomic DNA at 56 days
- 3. Fetus 5983 genomic DNA at 56 days
- 4. Fetus 6032 genomic DNA at 58 days
- 5. Fetus 6045 genomic DNA at 56 days
- 6. Fetus 5846 genomic DNA at 79 days
- 7. Fetus 5996 genomic DNA at 77 days

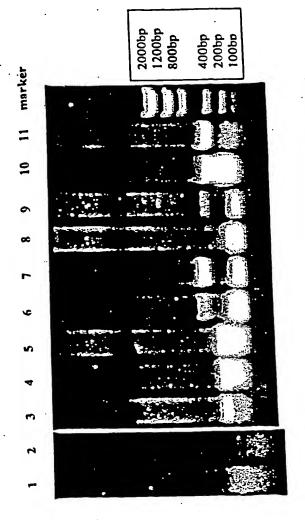
Feius	Clone	lgH	<u>Ley</u>
5968	B4-2	Pos	Pos
5983	B2-13	Neg	Neg
6032	B4-8	Pos	Pos
6045	B2-22	Pos	Pos
	B4-8	Neg	Neg
5846	B4-2	Pos	Neg
5996			

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Human mu constant region in bovine brain cDNA from fetus 5996. Human mu constant region in bovine liver cDNA from fetus 5996.

Human mu constant region in bovine spleen cDNA from fetus 5996. Human mu constant region in human spleen cDNA.

Bovine rearranged Cmu heavy chain in bovine spleen cDNA from fetus 5996. Human mu constant region in mouse spleen cDNA with HAC.

Bovine rearranged Cmu heavy chain in mouse spleen cDNA with HAC. Bovine rearranged Cmu heavy chain in human spleen cDNA.

GAPDH primers in bovine spleen cDNA from fetus 5996.

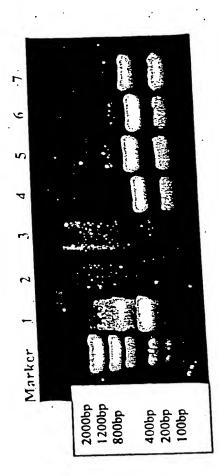
GAPDH primers in mouse spleen cDNA with HAC. GAPDH primers in bovine liver cDNA

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Bovine rearranged Cmu heavy chain in bovine brain cDNA from fetus 5996. GAPDH primers in bovine liver cDNA

Bovine rearranged Cmu heavy chain in bovine liver cDNA from fetus 5996.

Bovine rearranged Cmu heavy chain in bovine spleen cDNA from fetus 5996. GAPDH primers in bovine spleen cDNA from fetus 5996.

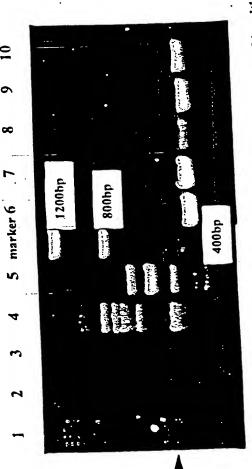
GAPDH primers in bovine brain cDNA from fetus 5996. Bovine rearranged Cmu heavy chain positive control. .7.

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Human rearranged Cmu heavy chain in mouse spleen cDNA with HAC (+ control) Human rearranged Cmu heavy chain in bovine liver cDNA from fetus.

Human rearranged Cmu heavy chain in bovine brain cDNA from fetus 5996 Human rearranged Cmu heavy chain in human spleen cDNA (+ control).

Human rearranged Cmu heavy chain in bovine spleen cDNA from fetus 5996.

GAPDH primers in bovine spleen cDNA from fetus 5996. GAPDH primers in mouse spleen cDNA with HAC

GAPDH primers in bovine brain cDNA from fetus 5996. GAPDH primers in bovine liver cDNA from fetus 5996.

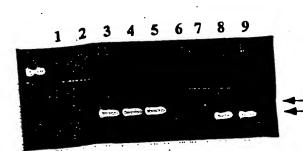
GAPDH primers positive control

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FIG. 9



- 1. Mouse spleen (negative control)
- 2. Bovine spleen (negative control)
- 3. Fetus 5996 brain

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- 4. Fetus 5996 liver
- 5. Fetus 5996 liver
- 6. Fetus 5996 spleen
- 7. Fetus 5996 spleen
- 8. \( \Delta \text{HAC-chimeric mouse spleen} \)
  (positive control)
- 9. Human spleen (positive control).

Unspliced genomic fragment Spliced transcript

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FIG. 10



- 1. Mouse spleen (negative control)
- 2. Bovine spleen (negative control)
- 3. Fetus 5996 brain
- 4. Fetus 5996 liver
- 5. Fetus 5996 liver
- 6. Fetus 5996 spleen
- 7. Fetus 5996 spleen
- 8. AHAC-chimeric mouse spleen (positive control)
- 9. Human spleen (positive control)

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## FIG. 11 A

SEQ ID NO: 49

5'

GGGAAG GAAGTCCTGTGCGACCANCCAACGGCCACGCTGCTCGTANCCGACG
GGGAAT I'CTCACAGGAGACGAGGGGGAAAAAGGGTTGGGGGGGATGCACTCC
GGGAAT I'CTCACAGGAGACCAGGGTTCCNTGGCCCCAGNNGTCAAA3'
CTGAGGAGAGACGGTGACCAGGGTTCCNTGGCCCCAGNNGTCAAA3'

## FIG. 11B

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						,	
55 A 0	TICACCTICAGIGACTACATGAGCTGGATCCGCCAGGCTCCAGGGAAGGGGGFFFFFFFFFF	CTG GAG TGG GTT TCA TAC ATT AGT AGT GGT AGT ACC ATA TAC TAC GGA GAC L B W V S Y I S S G S T I Y Y A D	TCT GTG AAG GGC CGA TTC ACC ATC TCC AGG GAC ACC AAG TTC ACC ATC TCC AGG GAC AAC GCC AAG AAC TCC ATC TCC AGG GAC AAC GCC AAG AAC TCC ATC ACC AGG GAC AAC AAC AAC AAC AAC AAC AA	216 235 244 253 262 271 226 235 244 253 262 271 CTG CAAATG AAC AGC CTG AGA GCC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GAG GCC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GAG GCC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GCG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GAG GCC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC GCG GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC AGG GCC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC AGG GCC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC AGG GCC GAG GAC ACG GCT GTG TACTGT GCG AGA CTG CAAATG AAC AGC AGG GCC GAG GAC ACG GCT GTG TACTGT ACG AGA ATG AAC AGC AGA ATG AAC AGG AGG AGG AGG AGG AGG AGG AGG AG	ATA ACT GGG GAT GCT TITT GAT ATC TGG GGC CAA GGG ACA ATG GTC ACC GTC TCT ATA ACT GGG GAT GCT TITT GAT ATC TGG GGC CAA GGG ACA ATG GTC ACC GTC TCT ATA ACT GGG GAT GCT TITT GAT ATC TGG GGC CAA GGG ACA ATG GTC ACC GTC TCT ATC TGG GGC CAA GGG ACA ATG GTC ACC GTC TCT ACC TGG GGC ACA GGG ACA ATG GTC ACC GTC TCT ACC TGG GGC ACC ATG GTC ACC ACC ACC GTC ACC ACC ACC ACC GTC ACC ACC ACC ACC ACC ACC ACC ACC ACC A	1 T G D A 5 343 352 361 370 379  D7-27 334 343 345 CCTTTTTCCCCTCGTCTCTCTGTGAG AATTCC TCA GGG ACITGCA TCC GCC CCA ACC CTTTTC CCC CTC GTC TCC TCT GAG AATTCC TCA GGG ACITGCA TCC GCC CCA ACC CTTTTC CCC CTC GTC TCC GCC CCA ACC CTTTTC CCC CTC TCC GCC CCC ACC CTTTTC CCC CTC TCC GCC ACC GCC ACC CTTTTC CCC CTC TCC GCC ACC A	
S S	AAG K	<b>ბ</b>	17	7 C C	· 50	Şz	
> V	විටි	TAC	277. 8	გე. ექე	CAC TAC	GAG B	
\$6 <b>A</b>	100 CCA G	TAC	208 2 A A Q	26. T TA	316 G GTC	E 2	
15T O	<b>6</b> €€	ATA	AAC	615 4 C	Y.	C TCC	
70C 8	CAG	ACC T	90 CGCC	8 t. <b>4</b>	07 15 AC	61 C GTC V	
CC CTC	20 CGC <b>X</b>	145 F AGT A S	CAACO	. 2 CG GC		"E"	
AGA R	ATC	7 GG	G GA	ACAC D		17. CT	<del>Z</del>
ر د در	%2 C TGC	136 ST AG	190 190 190 190 190	244 3AG G B	298 GG G	352 CTT7	
2010 3 S	G AG	SSS	TCTC	ე ≺	ATCT I	ACC	i
. YO	CAT	I A	T T	AGA R	GAT,	, &	•
6 L G	73 AC TA Y Y	127 FAC.A Y	181 TTC /	235 CTG	289 FF	, ex 55	<b>¢</b> ' ,
83 *AGG	ACT.	ST S	QS ≈	S S	<u> 1</u> 001	A 70,	n -
and 5 GTC A V	AGT G	£5>	2000	Y Y	G GA	1 % C	• •
s: 52 10 17G	A COL	315 <b>≫</b>	17. 3 AAG	22 X ATA	22 27 GG	<b>.</b>	֓֞֞֜֜֜֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֟ ֖֖֖֖֖֖֓
0N C	ACC	G GAC	T GTC	, Y	, AT	1 70 CA GG	
SEQ ID NOS: 52 and 53  10  10  10  10  S. GGA GGC TTG GTC AAG CTC TGT GCA GCC TCT GGA  S. GGA GGC TTG GTC AAG CCT GGA GGG TCC CTG AGA CTC TCC TGT GCA GCC TCT GGA  S. GGA GGC TTG GTC AAG CCT GGA GGG TCC CTG AGA CTC TCC TGT GCA GCC TCT GGA  S. GGA GGC TTG GTC AAG CCT GGA GGG TCC CTG AGA CTC TCC TGT GCA GCC TCT GGA GGC	) F	5 <b>-</b>	70	, p.	<b>-</b> ≺	. F	)
S.							•

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5' GTG GAG TCT GOG OGA GGC TTG GTA CAG CCT GGG AGG TCC CTG AGA CTC TCC TGT TIC GAT CTC TGG GGC CGT GGC Age cro Aga Gee Gag Gat Aco Get oro tat GAC TCC GTG AAG GGC CGA TTC ACC ATC TCC AGA GAC AAT TGG TAT GAC GGA GCG TCA GGA TTC ACC TTC AGG AAC TTT GGC ATG CAC TGG GTC TAC TGT GCG AGA GAT CGC AAT GGC CTG AAG TAC N addition GGC AAG GGG CTG GAG TGG GTG ACA GT מדר זכר זכר דפד מאה אאד דנים נכק דרט מאז D6-39 SEQ ID NOs: 54 and 55 12 O

=1G. 12E

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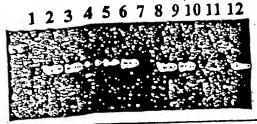
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FIG. 13



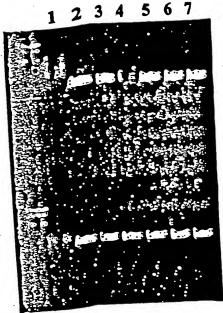
Fetus	Clone	_JgH_	_Igy
5580	412	Pos	Pos
5848	214	Neg	Neg

- 1. Bovine genomic DNA (negative control)
- 2. Fetus 5580 genomic DNA (IgA)
- 3. Fetus 5580 genomic DNA (Igh)
- 4. Fetus 5848 genomic DNA (Igλ)
- 5. Fetus 5848 genomic DNA (Igh)
- 6. Positive control (Human genomic DNA)
- 7. Bovine genomic DNA (negative control)
- 8. Fetus 5580 genomic DNA (IgH)
- 9. Fetus 5580 genomic DNA (IgH)
- 10. Fetus 5848 genomic DNA (IgH)
- 11. Fetus 5848 genomic DNA (IgH)
- 12. Positive control (Human genomic DNA)

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FIG. 14



lgH

- 1. Bovine genomic DNA (negative control)
- 2. Fetus 5442A genomic DNA (91 day)
- 3. Fetus 5442A genomic DNA (91 day)
- 4. Fetus 5442B genomic DNA (91 day)
- 5. Fetus 5442B genomic DNA (91 day)
- 6. Fetus 5968 genomic DNA (56 day; positive control)
- 7. Human genomic DNA (positive control)

Igλ

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1. Bovine spicen (negative control)

2. Fetus 5442A brain 3. Fetus 5442A liver

5. Fetus 5442A spleen
5. Fetus 5442A spleen

6. Fetus 5996 spleen (positive control)
7. AHAC-chimeric mouse spleen

(positive control)

Unspliced genomic fragment



FIG. 15

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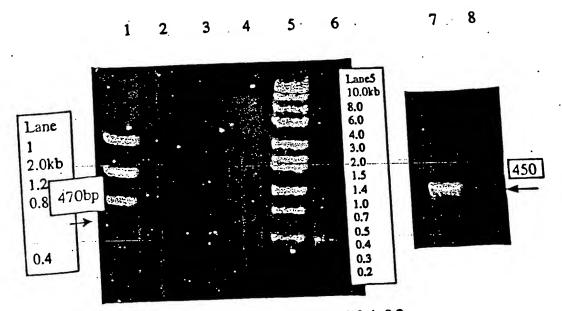
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- 1. Low Mass Ladder: 2.0, 1.2, 0.8,0.4, 0.2 0.1kb
- 2. Normal Bovine spleen cDNA negative
- 3.  $\Delta\Delta$ HAC 5868A spleen
- 4. empty
- 5. Hi Lo

#### 0.2,0.1kb

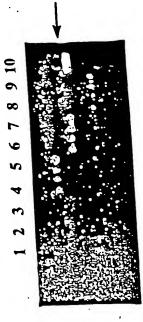
- 6. To Mouse HAC spleen cDNA positive
- 7. GAPDH product from 5868A spleen cDNA
- 8. GAPDH product from normal bovine cDNA

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Bovine spleen (negative control) Fetus 5442A brain Fetus 5442B brain

Fetus 5442B spleen Fetus 5442A spleen Fetus 5442B spleen Fetus 5442A spleer Fetus 5442B liver Fetus 5442A liver



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1. Bovine spleen (negative control)
2. Fetus 5442. AHAC-chimeric mouse spleen Fetus 5442A spicen Fetus 5442A spicen Fetus 5442A liver ن ف نه



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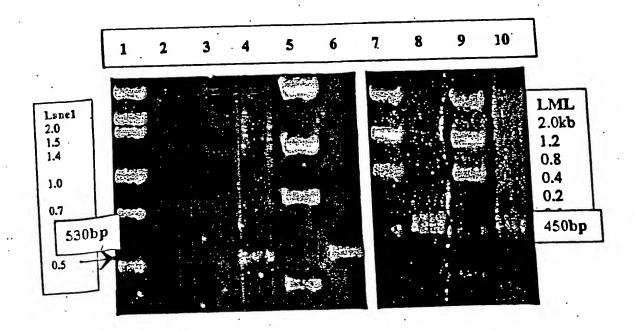
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FIG. 19



- 1. Hi-Lo MW:2.0,1.5,1.4,1.0,0.7,0.5 kb
- 2. AAHAC 5868A fetal brain cDNA
- 3. AAHAC 5868A fetal liver cDNA
- 4. AAHAC 5868A fetal spleen cDNA
- 5. Low Mass Ladder
- 6. Te Mouse HAC spleen cDNA positive control (530bp).
- 7. Low Mass Ladder
- 8. GAPDH AAHAC 5868A brain cDNA
- 9. Low Mass Ladder
- 10. GAPDH ΔΔHAC 5868A liver cDNA

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**V1-17** TCT GGA AGC AGC TCC AAC ATC GGA AGT AAT TAT GTA TAC TGG TAC CAG CAG CTC CCA GGA ACG s ACC CTC CTC ACT CACTGT GCA GGG TCC TGG GCC CAGTCT GTG CTG ACT CAG CCA **TOT** CCC TCA GCG TCT GGG ACC CCC GGG CAG AGG GTC ACC ATC TCT O 0 0 O O S O Ö I SEQ ID NOs: 56 and 57 Z S

TTC GGC GGA GGG ACC AAG CTG ACC GTC CTA GGT CAG CCC AAG GCT GCC GCC CCC AAA CTC CTC ATC TAT AGG AAT AAT CAG CGG CCC TCA GGG GTC CCT GAC TCC GAG GAT GAG GCT GAT TAT TAC TGT GCA TGG GAT GAC AGC CTG AGT GGC TCC AAG TCT GGC ACC TCA GCC TCC CTG GCC ATC AGT GGG CTC ĸ 0 Z S Z O K × 口 S O CGA TTC TCT 口 990

ICC TCT GAG GAG CTT CAA GCC AAC AAG GCC 0 ٦. U CCC TCG GTC ACT Ö

ACA CTG GTG 3'

FIG. 20

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TCT GAG CTG ACT CAG GAC CCT GCT GTG TCT GTG GCC TTG GGA CAG AGT TGG ACC CCT CTC TGG CTC ACT CTC TTC ACT CTT TGC ATA GGT TCT SEQ ID NOs: 58 and 59 ≯

'n

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0

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S

ACA GTC AGG ATC ACA TGC CAA GGA GAC AGC CTC AGA AGC TAT TAT GCA AGC TGG a O 0 U

TAC CAG CAG AAG CCA GGA CAG GCC CCT GTA CTT GTC ATC TAT GGT AAA AAC AAC V2-13 CGG CCC TCA GGG ATC CCA GAC CGA TTC TCT GGC TCC AGC TCA GGA AAC ACA GCT 0 Ö Ö 0

TG ACC ATC ACT GGG GCT CAG GCG GAA GAT GAG GCT GAC TAT TAC TGT AAC 0 O

×

CGG GAC AGC AGT AAC CAT CTG GTA TTC GGC GGA GGG ACC AAG CTG ACC 0 S

GGT CAG CCC AAG GCT GCC CCC TCG GTC ACT CTG TTC CCA CCC TCC TCT O GTC

CAA GCC AAC AAG GCC ACA CTG GTG 3' Z E GAG GAG

Title: TRANSGENIC UNGULATES HAVING REDUCED PRION PROTEIN ACTIVITY AND USES THEREOF Applicant(s): James M. Robi et al. Filing Date: November 10, 2003 Serial No.: N/A Page 32 of 73 Customer No.: 21559

File: HAC. 006 10° 10' 102 103 FL1-Height **B-IgM** HAC. 006 Marke FIG. 22H 40 60 80 100 120 4 de la constantion de la const SO 0 Counts Human Lamda File: HAC. 005 10° 10' 10² 10³ FL2-Height HAC. 005 Human Lamda 07 FIG. 22G 40 60 80 100 120 40 60 80 100 120 50 Conuta 10° 10' 102 103 10 File: HAC. 004
Marker % Total
All 100.00 unstained FL2-Height Ξ HAC. 004 80 100 120 09 01 Б SO Counts unstained File: HAC. 004 Marker % Total 10° 10¹ 10² 10 FL1-Height Ξ HAC. 004 FIG. 22E Counts 700 120 400 120 120 120 20 Fetus #5442B

Title: TRANSGENIC UNGULATES HAVING REDUCED

PRION PROTEIN ACTIVITY AND USES THEREOF

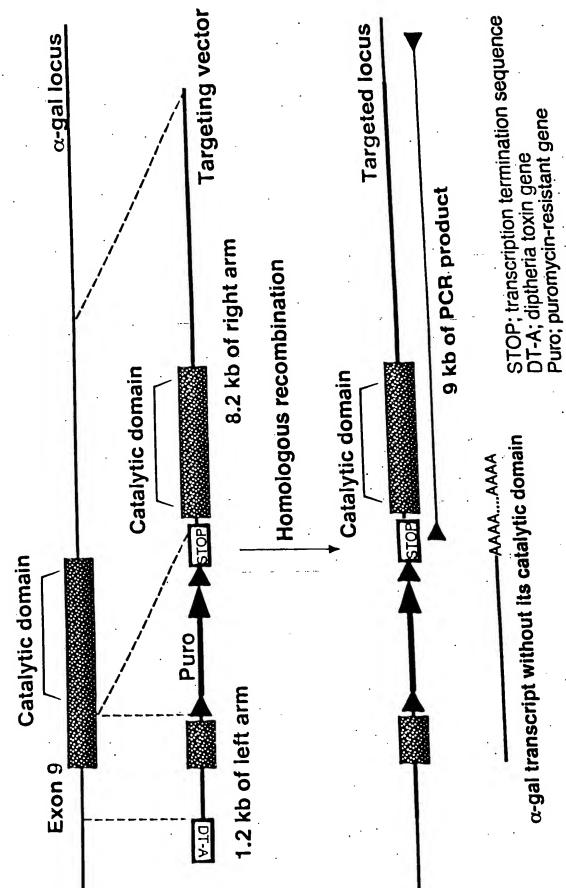
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Title: TRANSGENIC UNGULATES HAVING REDUCED PRION PROTEIN ACTIVITY AND USES THEREOF Applicant(s): James M. Robl et al.
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FIG. 23



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Customer No.: 21559 PACKAGE AAV PARTICLES Primer 1 Sacil site BamHl

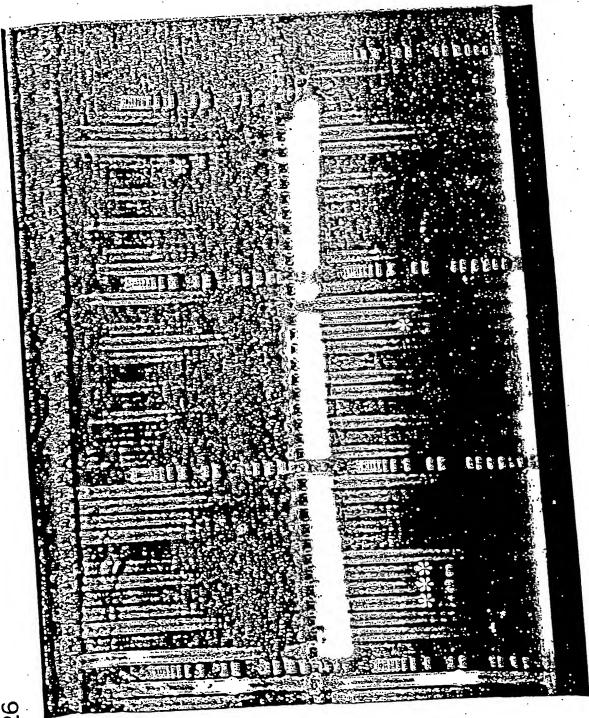
Title: TRANSGENIC UNGULATES HAVING REDUCED PRION PROTEIN ACTIVITY AND USES THEREOF Applicant(s): James M. Robl et al. Filing Date: November 10, 2003 Serial No.: N/A Page 36 of 73 Customer No.: 21559 1423 bp fragment Insert drug marker

Exons 3 and 4 deleted

FIG. 25

1662 bp fragment

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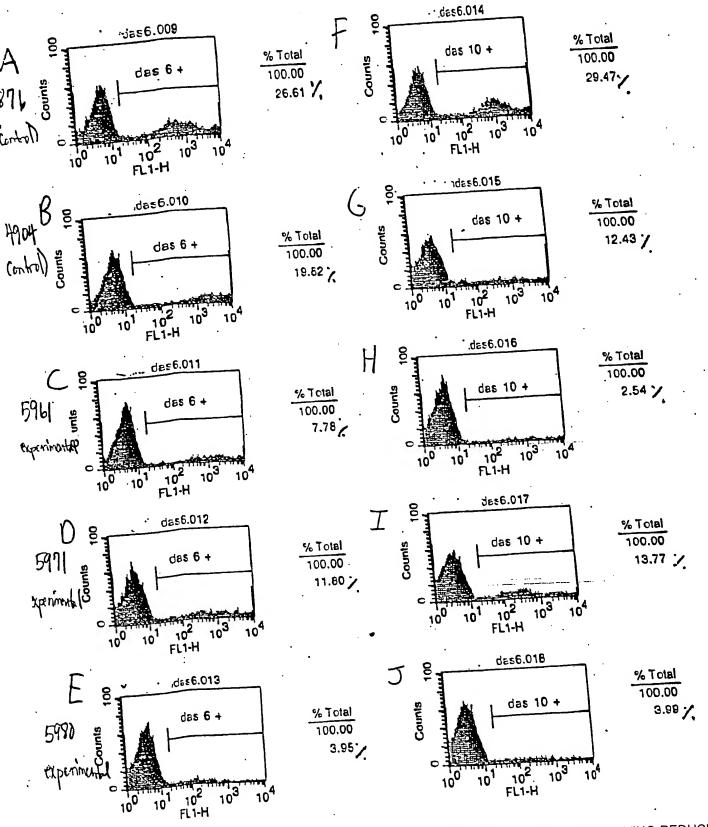
Applicant(s): James M. Robl et al. Filing Date: November 10, 2003 Serial No.: N/A Customer No.: 21559

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FIG. 27

			nd pregnanci	Doba H	AC renenera	ted fibro	bla <b>sts</b>				•	
		NT. ET E	nd pregnance	No of Blast	AC TEGETICIS	Pres	onancy stal	ne		150 d	180 <b>d</b>	210 d
	Cell line	TOTAL NI	8 MO OI DARWI	Transferred	No Rectos	40 d	60 d	_90d	_120.d_	3	3	3
	. ID	lo cultur	34 (28)	27 .	17	3	3	1	ĭ	1	1	
•	D5968	174 216	10(7)	8	4 .	` ]	ò	Ö	0	0	. 0	
	D6045	122	20 (23)	12 .	9	1	3 .	3	2	2	2	
	D6045	161	18 (18)	14	. 7	. 3	6 .	0	0	0	U	
	D6032	188	15 (11)	11	11	•	1	1	1			
	D6032	198	20 (14)	16	10		2	2	2			
	D8032	200	. 17 (12)	12	•	3	1	1	0			
	D8032	180	11 (9)	10	11	2	1	1	1			
	De032	135	22 (23)_	. 22	13	<u> </u>	2	1			. •	
	D6032	140	35 (36)	25 26	13	. 2	્2	1				
	D5968 D5968	180	30 (24)	20 32.	16	• 4		•				•
	D6045	170	46 (39)	1	. 1	0					•	
	" D6045	60	7 (13)	3	2	• 1						
	D6045 SL	OT 108	9 (12) 8 (15)	2	1	. 0						
	D6045	70		. 7	5	. 0						•
	C8045 SI	OT 128	e (18)	. 8	. 3	. 2						•
	D604			3 .	2							
	D6045 SI			18		•					•	
	D604	سم : •	) · 11 (18)	2								
	D6045 S		15 (27)	18	•				,		-	
	D6045 S	91	0	10	6	•						•
	. D6045 5			· :=	6				•	•		
	D6045 S	ย <b>กร 1</b> 0			4		. •			•		•
	D59	NA 12	'- a and		4		:		•			
	D&968	CL CT 6			7		•	•		•		• • • • • • • • • • • • • • • • • • • •
	D59	68 14	1-0		3	•						
	D5968	SLOI 2		) 20	10				•	٠.		
	D56	) 58k	14 (22	) 12	•				•			
	D9668	SLUI	3 1 (11								•	
	. 81	)	53 , 8 (18		3							
	_	_ 1	08 4 (5)		3					•	•	•
		1	00 1(1)		6		:				•	
	_	•	90 10 (1) 110 13 (1	·, .				•				
		OT.		''				•			•	
		D	,	~,	. 1					,		
	. \$	TOT	83 5 (E			)						
		D .	78 . 7 (1			}				•		
	5	LOT	88. 7 (1			!	•				•	•
		D .	g3 9 (1			•		•				
		SLOT	85 20 (		·	0		•	•	•		_
		D	77 40			2 58	•				٠ .	• .
	1	SLOT	.017 £15 (		1 <b>7</b>	<b>34</b>	•					

Burninery Prog Status	No of Prognancies
> 40 d	9
> 90 d	2
> 120 d	4
> 180 d	3
> 210 d	3
. Yotal	21



Figures 28A-28J

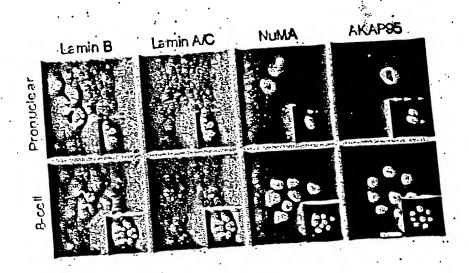
Title: TRANSGENIC UNGULATES HAVING REDUCED PRION PROTEIN ACTIVITY AND USES THEREOF Applicant(s): James M. Robl et al.

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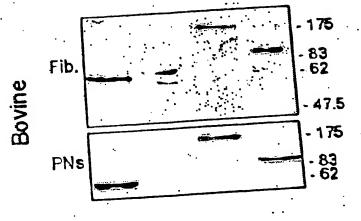
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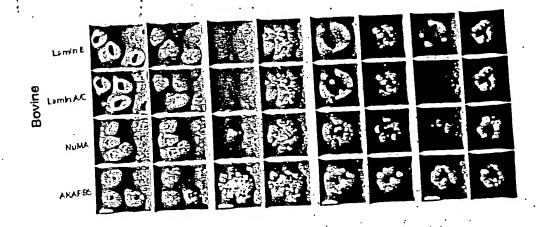


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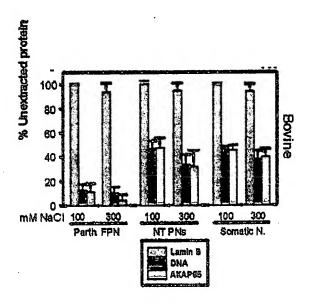


Applicant(s): James M. Robl et al.

Filing Date: November 10, 2003

Serial No.: N/A

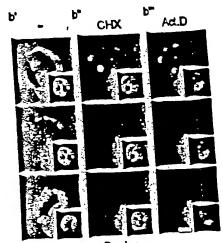
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## FIGURE 32



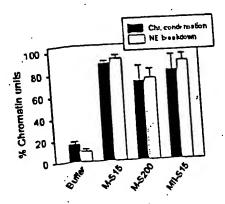
Bovine

Applicant(s): James M. Robl et al. Filing Date: November 10, 2003

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FIGURE 33

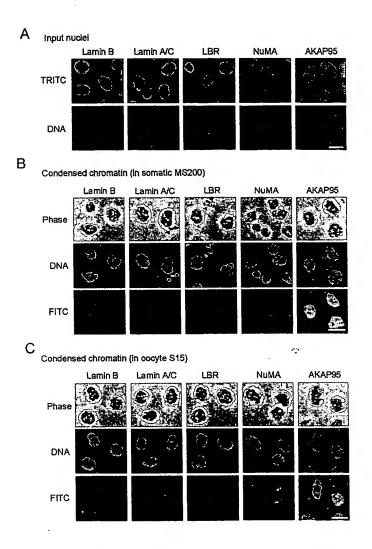


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## Figures 34A - 34C

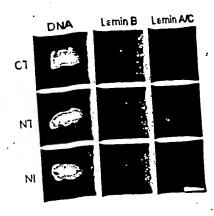
Applicant(s): James M. Robl et al. Filing Date: November 10, 2003

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## FIGURE 35

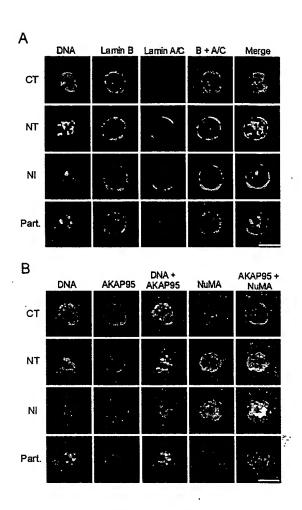


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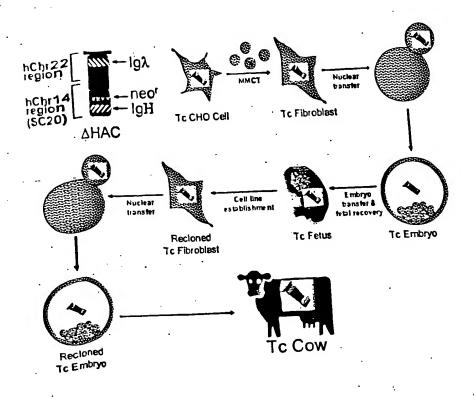


FIGURE 37

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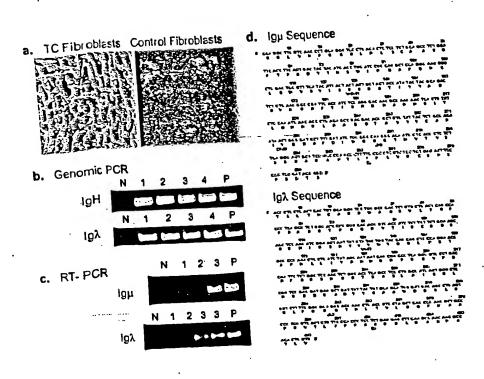


FIGURE 38A-D

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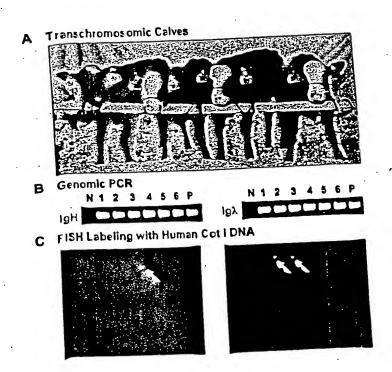


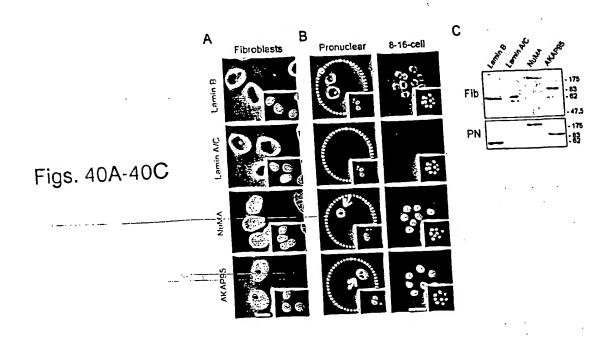
FIGURE 39 A-C

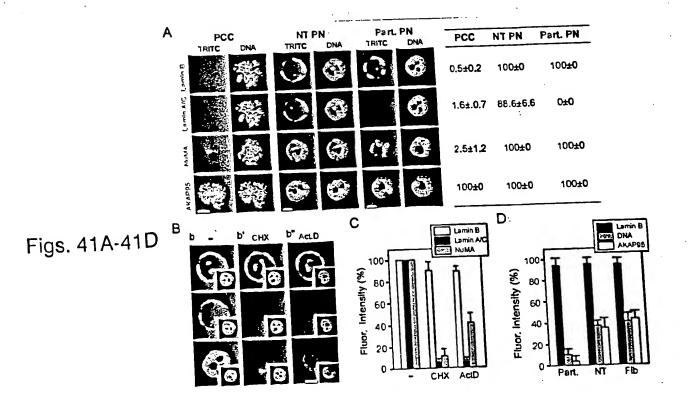
Applicant(s): James M. Robl et al.

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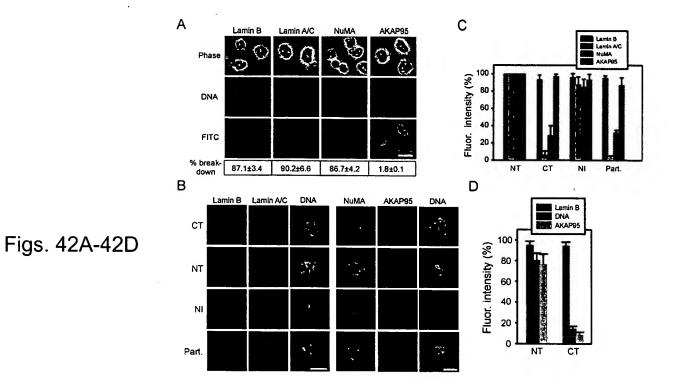


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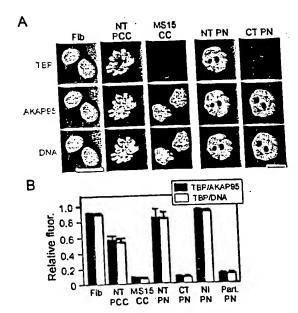
Applicant(s): James M. Robl et al.

Filing Date: November 10, 2003

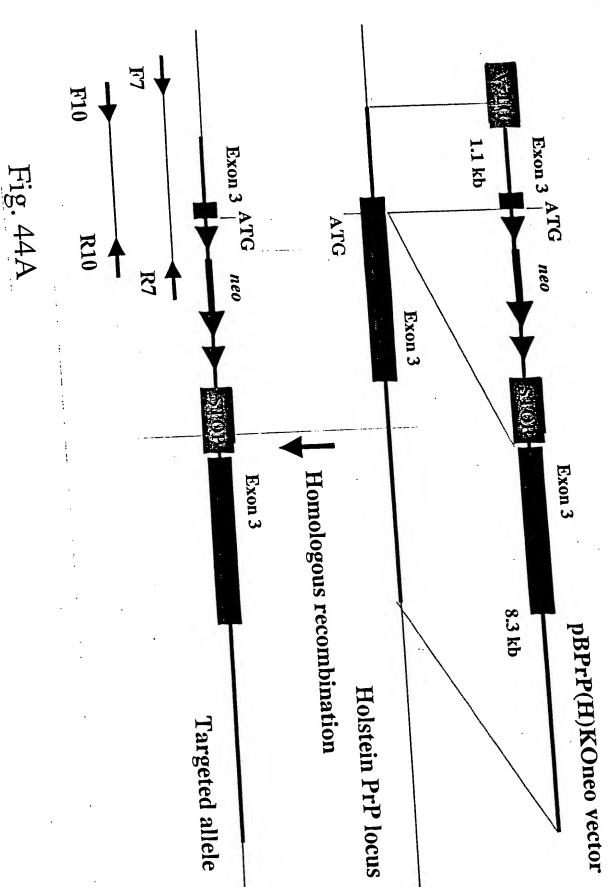
Serial No.: N/A

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Figs. 43A and 43B



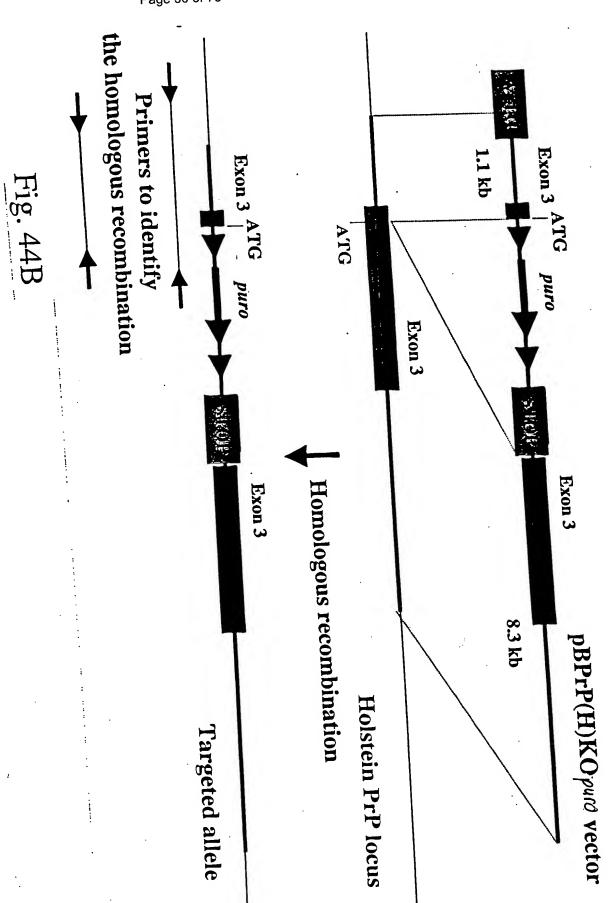
Title: TRANSGENIC UNGULATES HAVING REDUCED PRION PROTEIN ACTIVITY AND USES THEREOF Applicant(s): James M. Robl et al. Filing Date: November 10, 2003 Serial No.: N/A Page 55 of 73 Customer No.: 21559



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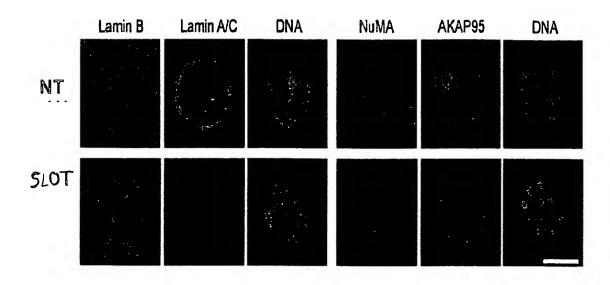
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Holstein x Jersey	Holstein	Cell line
141	94	No of screened clone
75	51	Primers F7 x R7
75	51	Primers F10 x R10
>50 %	>50 %	Frequency

Fig. 44C

## Figure 45A



Title: TRANSGENIC UNGULATES WITH REDUCED PRION PROTEIN ACTIVITY AND USES THEREOF

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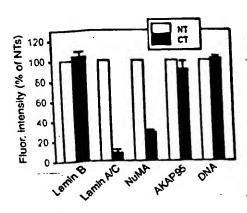
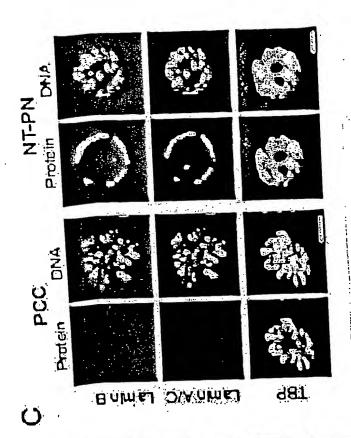


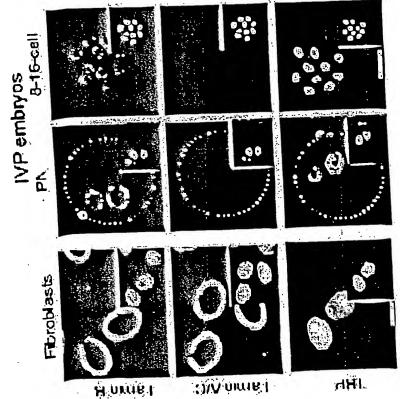
Figure 45B

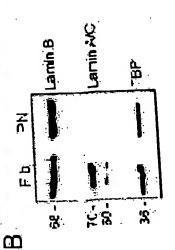
Applicant(s): James M. Robl et al. Filing Date: November 10, 2003

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Filing Date: November 10, 2003 Serial No.: N/A Page 61 of 73 Customer No.: 21559

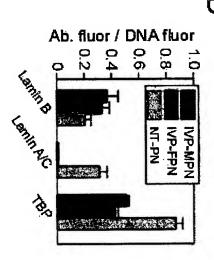


Figure 46D

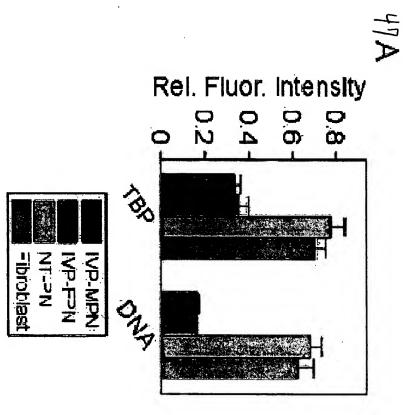
Title: TRANSGENIC UNGULATES WITH REDUCED PRION

PROTEIN ACTIVITY AND USES THEREOF

Applicant(s): James M. Robl et al.

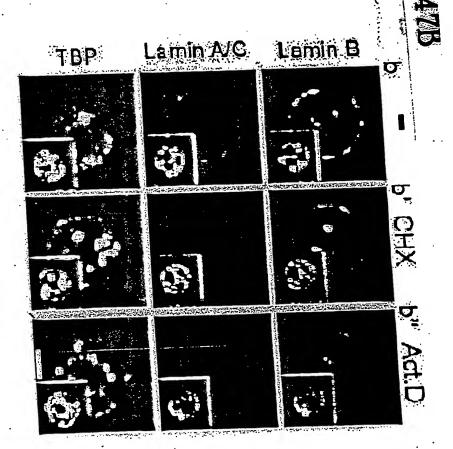
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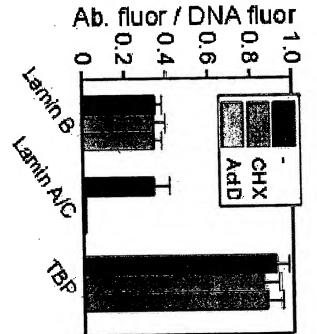
Title: TRANSGENIC UNGULATES WITH REDUCED PRION PROTEIN ACTIVITY AND USES THEREOF

Applicant(s): James M. Robl et al.

Serial No.: N/A Filing Date: September 26, 2003 Customer No.: 21559 D--- 62 of 112

Applicant(s): James M. Robl et al.

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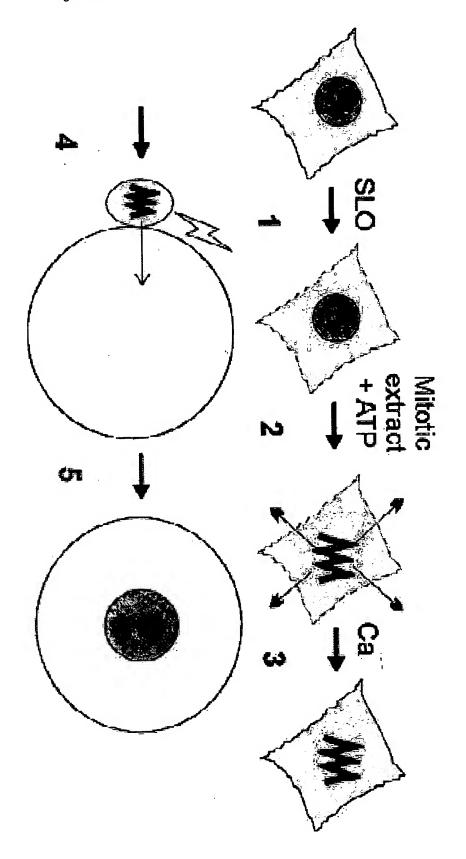


Figure 48

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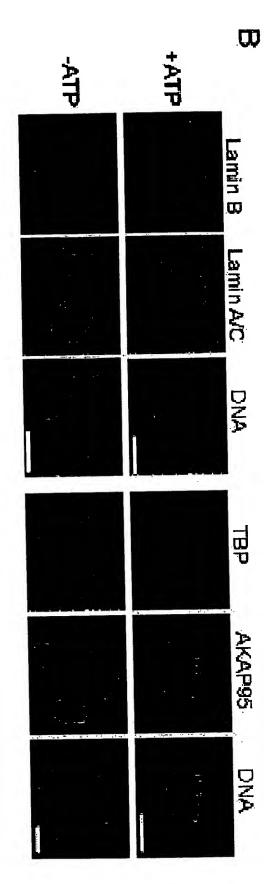
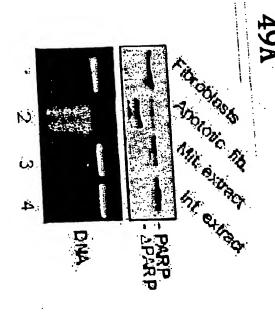


Figure 49

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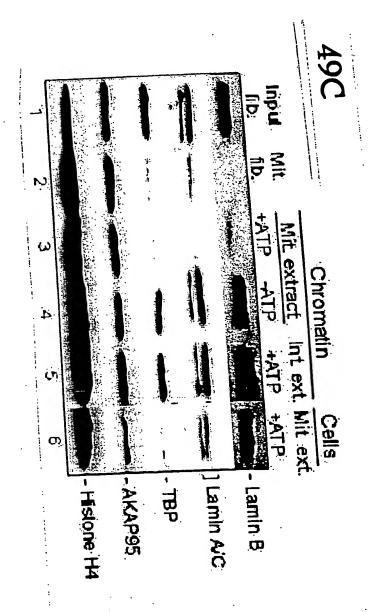
Customer 10, 2003 Serial No.: N/A Customer No.: 21559



Applicant(s): James M. Robl et al. Filing Date: November 10, 2003

Serial No.: N/A

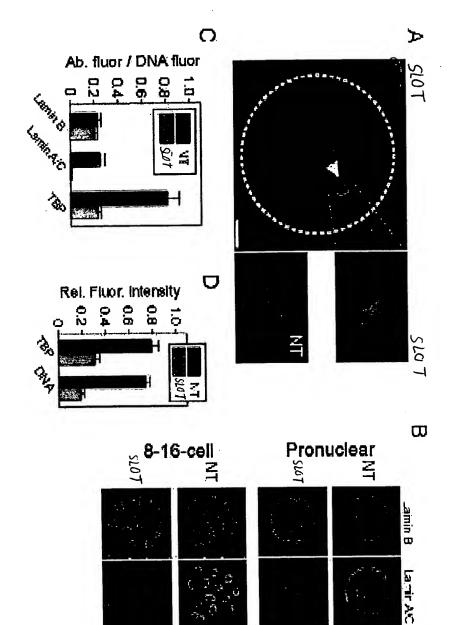
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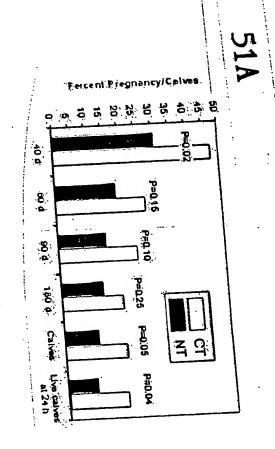
2

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Figures 50A-50D

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Customer

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Applicant(s): James M. Robl et al.
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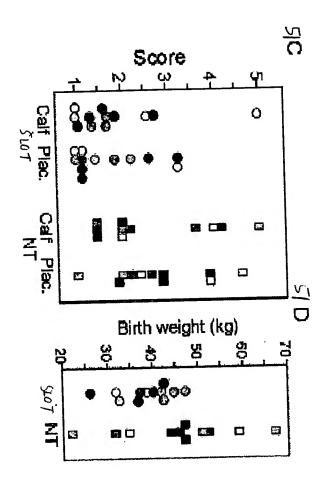




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